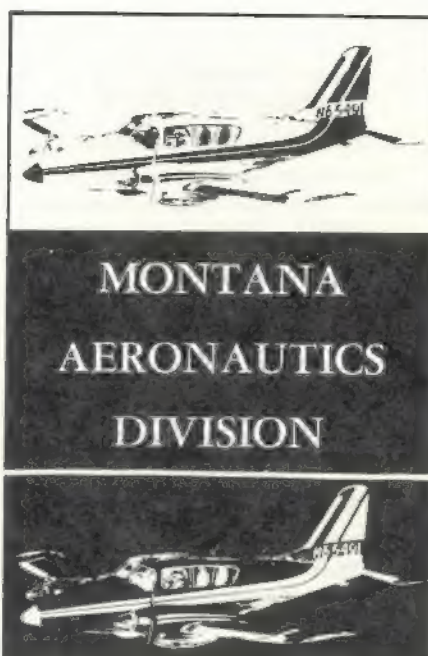




Lockheed C141 Starlifters preparing to leave the Helena Airport with personnel of the Fifth Special Forces and Marines, September 28, 1977.



VOL. 28, NO. 10

MONTANA AND THE SKY

NOVEMBER, 1977

1978 PILOT REGISTRATION

Applications have been mailed to all pilots who were registered with the Montana Aeronautics Division for 1977. If you have not received your application or if you know of anyone who needs one, let us know.

Please be sure to complete all entries in order to save unnecessary correspondence and expense. Remember, if you want to receive a copy of the airport directory revisions which will be ready for mailing some time in January, it will be necessary to send one dollar for this in addition to your one dollar registration fee. If you need an aeronautical chart, that will cost \$2.00. If you want to continue your subscription to this publication, be sure to include the \$1.50 subscription cost.

AIR RACE A SUCCESS

The first annual Great Falls to Jackpot, Nevada, air race held October 29, and sponsored by the Great Falls Hangar of the Montana Pilots Association, was a success in spite of the weather. Seventeen planes and 68 persons participated.

Jim Thompson, sweepstakes winner, a Great Falls contractor, flew the 420 mile route in the shortest time of 3 hours and 15 minutes, had the lowest fuel consumption, and at 53 was the oldest pilot entered in the competition.

Don Eades, Great Falls, was first in airplanes in the 150 mph category, Jim Clark, Billings, was first in the over 150 mph category. Runnersup included Geroge Tillitt, Forsyth, Ruth Smith of Rudyard, and Elizabeth Gunn of Helena. Mrs. Gunn in President of the Montana's 99's.

Besides those listed above, participants came from Cut Bank, Shelby, Miles City, Billings, Lewistown and Glasgow.

CHRISTMAS PRESENT

If you have not read the aviation history "Montana and the Sky" by Frank W. Wiley, former Director of the Montana Aeronautics Commission, you have missed a real treat. Why don't you hint to someone that you would like to receive it for Christmas. Or, if you know an aviation enthusiast, this book is an ideal gift for that person.

Written by Frank W. Wiley, under the auspices of the Montana Aeronautics Commission, the book is an authentic history of aviation in Montana. It contains more than 200 rare aviation photographs—stories of the adventures of 100 pioneer pilots and a history of events in aviation between the 1860's and the 1930's.

Cost of the book is \$10.00 and orders may be forwarded to the Montana Aeronautics Division, P. O. Box 5178, Helena, MT 59601.

1978 AIRPORT DIRECTORY

We have received several calls and letters with suggested revisions for the 1978 Montana Airport Directory. We appreciate the interest some of you have shown.

Remember, if you want an accurate directory, you should let us know of any changes you think should be made. Please drop a line or call our office at 449-2506 and ask for Ted Mathis.

HIGH FLYING WEDDING

Harold Matovich, Michel's Flying Service, Livingston, piloted the aircraft in which William Duffy and Romana Townsend were married Sunday, October 30, over Paradise Valley in Southcentral Montana.

The wedding ceremony lasted only 15 minutes, but the entire ride took an hour.

The pilot said he wouldn't mind doing it again—no comment from the bride and groom.

NOTAM

The unicom at the Great Falls International Airport at Great Falls, Montana, is now 122.95.

**DEPARTMENT OF
COMMUNITY AFFAIRS**

Thomas L. Judge, Governor
Harold A. Fryslie, Director
Marlin T. Mangan, Deputy Director

Official Monthly Publication
of the

AERONAUTICS DIVISION

Phone 449-2506

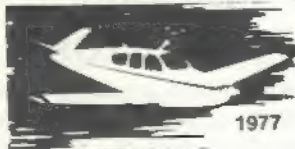
Box 5178

Helena, Montana 59601

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Administrator**

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Edited by: Bernice M. Peacock

THURBER'S HELENA



CALENDAR

December 13-14, 1977—Aviation Mechanics Refresher Seminar, sponsored by Montana Aeronautics Division, Coach House Motel, Helena.

December 15, 1977—Star Aviation Hearing on Certificate of Public Convenience and Necessity, Governor's Conference Room, Capitol Building, Helena.

December 16, 1977—Montana Aeronautics Board Meeting, Helena. (Note—November meeting postponed to December.)

January 1, 1978—1978 Pilot Registration due.

January 1, 1978—1978 Aircraft Registration due.

ADMINISTRATOR'S COLUMN



On October 25 Jack Wilson and I met at the Ramada Inn in Billings with officials from the Canadian Forces, U.S. Air Force, and Civil Air Patrol representing their respective Search and Rescue units. This meeting was to review search and rescue procedures and responsibilities common to both countries and to work out plans which would allow Canadian search planes to enter the United States during a Canadian search effort, and vice versa. During the past each country's search effort ended at their respective border.

A lost Canadian plane last spring pointed to the need for a cooperative effort and policy change by both countries. This meeting was most productive and continued planning and policy changes will be forthcoming.

I attended the Customs meeting held in Great Falls for the general aviation public. Mr. Sam Banks, U. S. Customs Operations Officer from the Washington, D. C. Customs Headquarters, gave a short slide presentation on some new customs requirements. I for one was very optimistic and pleased that we would finally have an opportunity to meet with Customs officials from Washington, D. C. as we have had many complaints from pilots having had bad experiences when crossing the Canadian border into the U. S. I felt such a meeting would give everyone the opportunity to discuss some of these problems. I was more than disappointed, not only by the general aviation turnout, but the extremely short time Mr. Banks was able to spend with us as he had an urgent need to catch an airline 40

minutes after the program started.

We will continue our efforts with our Congressional Delegation in an attempt to get the Customs laws changed to achieve some degree of equality for airplane vs automobiles crossing the border from Canada into the United States.

Star Aviation of Denver, Colorado has applied to the Aeronautics Board for a Certificate of Public Convenience and Necessity. The Board has set the hearing date on December 15.

Star Aviation has requested to serve Billings through Sheridan and Gillette Wyoming. They are presently serving Gillette with four daily round trips from Denver. They plan to serve Billings initially with Piper Chieftan airplanes, however, in addition to four Piper Chieftains, they also operate one Merlin Metroliner and one Mitsubishi MU2-J, both of which are pressurized prop jets.

In view of the tight budgeting, Aeronautics Board Chairman Richard O'Brien has decided to postpone the board meeting scheduled for November 18 and rescheduled it for December 16 to coincide with the Star Aviation Hearing.

FOOD FOR THOUGHT

The following is the text of a letter written to Flight Instructors by Myron K. Strand, a Designated Pilot Examiner. We think it well worth passing along.

"You are not teaching your students how to search for and find other aircraft. Each time you fail in this vital responsibility you increase the potential for a midair collision and you could be aboard the other aircraft when it happens!!

"Of all aircraft accidents, the midair collision is most likely to be fatal. We who have experienced the instant shock and terror of a near miss have truly flown away from the brink of death.

"It is up to you to set an example for your students to follow, and to set the standard of alertness that is needed. Even waiting until his second flight lesson is too late."

The person who gets ahead is the one who does more than is necessary and keeps on doing it.

CENTERLINE



By Jim White, Chief
Air Transportation Bureau
Enroute Flight Advisory Service
(EFAS)

The Enroute Flight Advisory Service, EFAS, was established on the west coast in 1972. The first stations which were operational were Oakland, Seattle, Portland, and Los Angeles. Twenty six additional facilities were commissioned in 1976. By the end of 1977 there will be a total of 44 facilities (flight watch stations) with outlets totaling approximately 175 across the entire U. S. The Great Falls facility will be commissioned on December 8.

Each EFAS outlet will receive and transmit on 122.0 Mhz. At 5000 feet AGL each outlet should provide communications over an 80 mile range.

The effectiveness of the system will depend on the support and cooperation of all who use it. The system should insure the latest and most reliable reporting of current weather conditions along the route of flight, which will be valuable to all aircraft flying at all altitudes.

The Great Falls EFAS will have remote outlets at Kalispell, Butte, Glasgow, and Ashton, Idaho. Billings and Miles City will be remote outlets from the Casper, Wyoming, control station.

You can simply listen to 122.0 to pick up weather information, or to give a PIREP. If you want to call EFAS, call "Great Falls Flight Watch," or "Casper Flight Watch." If you are uncertain as to what facility to call simply call "Flight Watch" and the facility receiving you will respond.

Interesting Notes

The Flight Safety Foundation has

given Qantas Airways, an Australian airline, a special award for "the finest air safety record" of any airline in the world, at its 30th International Air Safety Seminar. Qantas has flown 86.85 million revenue passenger kilometers in the past 25 years, carrying 13.13 billion passengers without a single fatality.

* * * * *

The Boeing 747 sets new records each day. The worldwide fleet of 747's have flown 5 million hours since the first 747 was delivered in December of 1969. The total increases about 3000 hours per day. The highest time 747 has logged more than 32,500 hours. Nineteen others have more than 27,000 hours each.

BILLINGS HANGAR REORGANIZES

Monday, November 7, 1977, the Billings Hangar of the Montana Pilots Association, after approximately three years of inactivity, again became active. The meeting was called to order at 8:00 p.m. in the Pilot's Lounge in the terminal building at Billings Logan Field by state MPA President Morris Rudio.

The business of the session was limited to the election of officers but much enthusiasm was shown by the crowd that filled the room. Approximately 20 people accepted nominations to serve as officers and directors, with at least that many more indicating willingness to serve on committees, etc. Officers chosen by the group for the 1978 year are:

President, Ray Curtis
Vice President, Bob Hector
Treasurer, Deanna Odegaard
Secretary, Dorothy Craig
Directors:

Keith Fitchett
Bryant Edsall
Orville Graham
Ray Young

A new and enjoyable, informative film was shown by Keith Fitchett on general aviation. Refreshments were served by Mrs. Mildred Rudio, Marian Wilson and Deanna Odegaard, with the crowd enjoying these and remaining on after the meeting to engage in hangar flying and good fellowship.

Following the election of officers new President Ray Curtis set up a meeting for Wednesday, November 9 at 8:00 p.m. to complete organization of the hangar and schedule the December meeting.

NEW RADIOS AT WOLF POINT AND SIDNEY

By: Robert L. Tillery
Chief, Miles City
Flight Service Station

The Miles City FSS has recently acquired remote 122.2 transceivers at OLF and SDY to complement our GDV and MLS radios for very extensive coverage of northern and eastern Montana. We can now talk to pilots from Circle to Scobey over OLF and PWD to ISN via SDY. Unfortunately, all three 122.2 radios and the GGW LRCO are connected to one speaker at the station. It is very difficult for the Specialist to know which radio to key when answering calls if the pilot does not state his position or the radio he is contacting us over when establishing initial contact. This often results in a time consuming search through the different radios or the keying of all the radios in an attempt to locate the caller. If the pilot were to establish initial contact by calling "Miles City Wolf Point Radio—N7791P" or "Miles City—N1772W at SDY," it would greatly enhance services and time available to aircraft. Our 123.6 frequency at Miles City is for Airport Advisory Services and is therefore very weak with poor coverage and often congested. For weather and services from MLS to the south and east, the MLS VOR is still our strongest radio.

BILLINGS HARVEST FESTIVAL

By: Morris Rudio

Saturday night, November 5, 1977 the annual Harvest Festival party hosted by Lynch Flying Service, Aerotronics, and Blaine's Helicopter Service, was held in Aerotronics' building at the Billings Airport.

Just as in the past the crowd showed up early and stayed late, enjoying the liquid refreshments, delicious barbecued beef and good music. Needless to say, the crowd filled the hall, enjoying dancing and meeting and renewing old friendships and acquaintances.

A big thank you and pat on the back is certainly due the above mentioned sponsors for again putting on a very successful social event for the flying public in the Billings area.

HOW WE DID



By: **David C. Kneedler**, Chief
Airport/Airways Bureau

The Airports Division of FAA's Rocky Mountain Region in Denver has just published a recap by state of airport development activity in the region for FY1977. The figures as presented suggested that it's "back patting time"—not just for us, but for FAA's Airports Field Office, city and county airport boards, airport managers and all others who had a hand in developing construction projects last year. Montana had the largest number of projects (20) of any state in the region. The \$9,466,251 federal dollars granted to Montana sponsors was second in amount only to Colorado, and represented 23% of all federal monies spent in the six-state Rocky Mountain Region.

Here is a list of the airports, (together with a brief description of work accomplished and federal monies granted) which undertook major airport improvements during the last fiscal year:

Billings **\$1,570,680**

Construct partial parallel taxiway with MITL and shoulder stabilization; relocate RVR; storm drainage system; road relocation; snow removal equipment; porous friction course, Runway 9/27; land reimbursement.

Bozeman **711,000**

Overlay with porous friction course Runway 12/30; snow removal equipment.

Butte **571,500**

Reconstruct portions of Runway 15/33; install beacon; security and

boundary fence; reconstruct apron; land for airport development; snow removal equipment

Glasgow **464,862**

Resurface and light Runway 12/30; snow removal equipment

Glendive **156,126**

Construct taxiway turnarounds, Runway 12/30, connecting taxiway, hangar access taxiways, and apron; construct maintenance equipment building; snow removal equipment

Great Falls **665,418**

Terminal bond retirement, fencing and gates, sidewalks, lighting and general aviation entrance to terminal building.

Great Falls **540,000**

Security fencing; rehabilitate and light connecting taxiway; rehabilitate and expand parking apron including flood lighting; construct and light connecting taxiway; construct parking apron and access road; snow removal equipment

Hamilton **104,310**

Land for clear zone and future development

Havre **313,261**

Surface treatment and seal, Runway 7/28; shoulder seal and safety area grading, Runway 7/25; surface treatment, seal coat, taxiway system and parking apron; construct parking apron; reconstruct entrance road; MIRL, Runway 7/25; taxiway lighting; beacon.

Helena **258,200**

Security and access road lighting; taxiway lighting; terminal building.

Kalispell **441,276**

Security fencing, strengthen portion of Runway 1/19; porous friction course, Runway 1/19; reconstruct apron.

Lewistown **532,862**

Resurface and light Runways 7/25 and 2/20; light and provide drainage grading, taxiways "A"; snow removal equipment.

Malta **218,116**

Rehabilitate and extend Runway 7/25 with turnaround; construct tiedown area; rehabilitate connecting taxiways, taxiway turnaround and parking apron; MIRL, Runway 7/25; beacon and lighted windcone; land for clear zone.

Miles City **202,089**

Construct taxiway turnaround; rehabilitate apron; relocate

hangar; expand apron including lighting rehabilitation; snow removal equipment; relocate fuel pits.

Missoula **1,417,759**

Construct drainage lines; reconstruct and overlay taxiways; overlay and strengthen apron; construct new apron; reconstruct apron.

Roundup **403,764**

Construct and light Runway 6/24; construct taxiway and apron; lighted windcone and beacon; fencing; land for airport development and clear zones.

Shelby **139,664**

Isolated reconstruction and partial reconstruction, Runway 5/23 and taxiways; plant mix wearing surface, Runway 5/23 and taxiways.

Sidney **216,000**

Snow removal equipment; VASI-2s; apron expansion; construct service road and taxiway access; land for clear zones.

Turner **238,821**

Construct Runway 6/24, apron and connecting taxiway; land for airport development and clear zone; fencing; segmented circle and windcone.

Wolf Point **300,543**

Resurface portions of Runway 10/28; construct partial parallel taxiway and tiedown area; reconstruct parking apron; rotating beacon and miscellaneous runway and taxiway lighting; snow removal equipment.

Putting together an airport development project takes many hours and days of communication, planning, coordination and just plain hard work by all concerned. And the local governments and others involved deserve a hearty congratulations. Although state money was involved in only 13 of the 20 projects, we were involved in some way or other in most of them and enjoyed very much working with the local communities in this effort.

Although the foregoing is an impressive track record, much remains to be done and many airports with plans and specs on the shelf are awaiting the availability of federal funding. This is all the more frustrating in view of the accumulation of \$3.44 billion in the Aviation Trust Fund while critical needs are going unmet.



ADMINISTRATOR RECEIVES APPOINTMENT

The accompanying photograph shows GADO Chief Charles D. Wright on the right, presenting Michael Ferguson, Aeronautics Administrator with an appointment as Accident Prevention Counselor. Mr. Ferguson is in the center. On the left is Jack W. Van De Riet, Accident Prevention Specialist, Helena GADO.

"IT'S THAT TIME AGAIN"

By: Dale Uppinghouse
Accident Prevention Specialist
FAA GADO 1

This is the time of the year when we experts (?) begin our winter warnings. We have pages of them. This worthy publication is not large enough to include all of them.

Rather than try to enumerate and remember all of these do's and don'ts of winter flying, we pilots can do something as good or better. We can use our heads for something other than a hat rack. Before starting a winter flight, we can visualize what we are

going to encounter and how we are going to cope with it. We have lived here long enough to know how machinery acts in cold weather. Let's remember that this airplane is a very delicate piece of machinery. It is not a jeep or FWD pickup.

What particular problems will we have, for instance, when we push this airplane out of a warm hangar into frigid cold air? Condensation, then freezing will occur, won't it? What will this do to the fuel system, etc.? Was it washed while in that hangar? More things to check, right?

Take a good look at the nose gear on your airplane. Open the cowl if necessary to see how it is supported. Was it made to plow through the snow drifts? I haven't found any made that strong. Several pilots tried plowing snow with them last winter and it cost them a bundle. Is there snow on the runway at the destination? How much? Sure is hard to tell from the air, but a phone call to an aeronautically qualified person at the scene may save a prop and an airplane and engine rebuild.

There are literally hundreds of winter flying traps waiting for us. Like I said, we can't list them all. We can avoid them, however—Using the best computer made, that bump between our shoulders.—Just one thing though, it has to be activated just like any other computer.

AVIATION MECHANICS REFRESHER SEMINAR



By: Jack Wilson, Chief
Safety & Education Bureau

The Montana Aeronautics Division will sponsor and conduct an Aviation Mechanics Refresher Seminar to be held in Helena December 13-14, 1977. This seminar will be similar to those conducted in the past, however there will be only one which will be conducted in Helena.

Aviation Mechanics throughout Montana will soon be receiving information and applications to attend this seminar. We would like to have the applications returned as soon as possible in order that we may complete plans for the final coordination.

Representatives will be present from Piper, Beech, Cessna, Champion Sparkplug, Bendix, Teledyne Continental Engines, AVCO Lycoming engines, and various other component manufacturers.

The Montana Aeronautics Division will furnish the classroom and housing for the Aviation Mechanics who attend. All other expenses will be the responsibility of the attendees.

Again, in order that prompt coordination can be accomplished, it is imperative that the mechanics return their applications as soon as possible after receiving them.



Hercules C130 being loaded with Fifth Special Forces equipment at the Helena Airport September 28, 1977.



Bill Chambers' Helena Vocational Education Class inspecting the Air Force Lockheed C141.

FIFTH SPECIAL FORCES

In excess of 100 personnel of the Fifth Special Forces (Green Berets), and a platoon of Marines, were based in the Helena vicinity from August 26 to September 28 for mountain and

demolition training. The Helena Airport saw more than their usual large aircraft activity when the personnel and their equipment were loaded aboard two Lockheed C141 Starlifters and a Hercules C130 for the long flight back to their South Carolina base.

The group will return for winter training the 28th of November.

AVIATION EDUCATION



By: **Sam Griggs**, Supervisor

On October 12, 25 students from the fifth grade of Broadwater School in Helena were given a tour of the airport and its facilities. We divided the group in two, one-half led by me, and the other half led by Jack Wilson.

My half of the group started out on the tour, with excellent presentations by the Weather Bureau, Tower and the Crash/Fire/Rescue. By the time we had returned to Aeronautics, Jack's team had completed their flying and had also started on their tour. My group then flew their turn in both Aeronautics single engined aircraft ably piloted by Vern Moody and Ted Mathis.

Two teachers, Lanore Johnson, and Louise O'Neill, and one of the student's mother, Mrs. Adams, accompanied the youngsters on the tour and the flights. Lanore Johnson attended the Aviation Workshop at Carroll College last summer.

By the end of the afternoon we had 25 thoroughly excited and awed youngsters. The enthusiasm at that age is higher than at any other age.

I combined a charter flight to Conrad with a visit to the high school on October 25. I invited Aeronautics Board Chairman Richard O'Brien to accompany me. We met with the Principal, Mr. Paul Stenerson. We discussed aviation courses at the high school, junior high school, and adult evening courses. Mr. O'Brien has agreed to teach next semester's course for the private pilot at Conrad High School, Adult Education Division.

I will assist in any way necessary and furnish supplies and curriculum.

WHY DO PILOTS HAVE ACCIDENTS WHILE DRINKING?

By: Alex G. Webb, M.D.

There is not question that pilots who drink do have more accidents. Statistics show that drinking causes problems in all types of activities involving coordination, reflexes, eyesight, balance and judgment. Some of the activities involved are automobile driving, swimming, motor-biking and boating, to list a few. More important than the number of accidents that occur is the fact that most of these accidents will have fatal endings.

Many pilots who drink feel that their performance is not impaired but in reality it IS IMPAIRED. Carefully controlled studies for the varying amounts of alcohol consumption have shown adverse alterations in judgment, mood, reasoning, coordination, reflex time, balance and eyesight.

Perhaps the most dangerous is the alteration caused by alcohol consumption in judgment. THE PILOT FEELS ADEQUATE EVEN THOUGH HE IS PHYSICALLY IMPAIRED. He is not aware of the loss of his physical skills and furthermore the euphoric mood prevents him from appreciating the seriousness of this situation.

Drinking is especially dangerous because the effects of alcohol are enhanced by altitude. Alcohol decreases the ability of the brain to use oxygen. A pilot at 10,000 feet MSL has two-thirds the amount of oxygen available to him that he had at sea level and if he has been drinking his brain cannot use even this reduced amount of oxygen fully.

At this point a pilot who has been drinking has compounding problems—he suffers from all the effects of alcohol, plus the effects of hypoxia. As you may or may not know, the effects of hypoxia are similar to the effects of alcohol—especially as related to mood elevation and impaired judgment.

An additional problem compounded by alcohol is eyesight. At 5,000 feet the reduction in available oxygen is already affecting the retina. (The retina, the seeing portion of the eye, is the most sensitive part of the body to oxygen deprivation.) IF THIS EFFECT IS AUGMENTED BY THE INHIBITING EFFECTS OF ALCOHOL ON OXYGEN UTILIZATION, THE PILOT BECOMES

IMPAIRED AT LESS THAN 5,000 FEET.

It takes the body three hours to eliminate the effects of one shot of whiskey or one pint of beer. Two double martinis on the ground equals four if one is in the air because of the hypoxic effect.

Back to the original question, "Why do pilots have accidents while drinking?" The answer is twofold.

Their coordination, reflexes, balance and eyesight are impaired and their mood and judgment are impaired enough to prevent them from being aware of these problems. In addition, impaired judgment produces poor in-flight planning, affecting fuel management, ground-to-air contact, preparation for descent, etc. Thus, pilots have accidents while drinking because flying requires the full use of the skills lost to alcohol and hypoxia.

(From the October issue of Minnesota Flyer.)

GENERAL AVIATION ACCIDENT PREVENTION PROGRAM

Safety Clinic

Program: Winter Flying, Emergency Landings in Unsuitable Terrain and Cold Weather Survival

DATES AND LOCATION:

November 16—Cut Bank, Airport Terminal

November 17—Chester, Frontier Aviation

November 29—Dillon, Vigilante Electric Building

November 30—Butte, Montana Power Auditorium, Montana St.

December 1—Bozeman, Chamber of Commerce

December 7—Chinook, VFW Hall

December 8—Shelby, Marias River Electric Building

December 13—Polson High School

December 14—Libby, Venture Inn

December 15—Kalispell, High School, Large Lecture Hall

January 5—Livingston, City/County Building

January 10—Helena, Army Aviation Support Facility, Airport

January 11—Great Falls, Air Guard Dining Hall

January 12—Choteau, Library

January 18—Havre, REA Reception Room

January 19—Conrad, Conrad Country Club

January 24—Hamilton, High School

January 25—Missoula, Vo-Tech, Ft. Missoula Complex, Room C-4

TIME: 7:30 p.m. to 9:45 p.m.

These meetings are open to the public, pilots and "co-pilots".

For further information, contact your local FAA Facility or:

Jack W. Van De Riet

Accident Prevention Specialist

Room 3, FAA Building,

Helena Airport

Helena, Montana 59601 (449-5270)

CONGRATULATIONS



FAA CERTIFICATES ISSUED RECENTLY TO PILOTS

STUDENT

Floyd Lawrence Husted,

Malmstrom AFB, MT

David Martin Norman, Butte

PRIVATE

Herbert Anton Olson, Laurel

Ruth Ann Urion, Billings

Bruce Francis Galvin, Billings

Neil Graham Zerbe, Lustre

Larry Dale Thompson, Glendive

Delbert Edwin French, Glendive

Michael Dane Walker, Stanford

Donald Ray Charlson, Hysham

Perry Wayne Toso, Anaconda

Gary D. McCartney, Chinook

Bruce Warren Anderson,

Kalispell

John Thomas Bowdish, Kalispell

William Vincent Vaughn, Libby

Mark Lovell McOmber, Deer Lodge

David Perley Burnham,

Whitefish

Walter Ford Hallenberg, Malta

Brent Duane Hintz, Wolf Point

Bruce Kevin Morse, Havre

Sharon Aho Kolstad, Wolf Point

Theodore Daniel Tenneson,

Helena

David Loren Dana, Great Falls

Dean Allan Hersey, Boulder

William Richard Hines,

Townsend

John Wiley Richardson, Havre

(Free Balloon)

COMMERCIAL

Robert Ralph Green, Three Forks

Charles Monty Chaffin, Helena

Gary Cyril Lowry, Missoula
 Thomas Michael Monaghan, Miles City
 Thomas Edward Hendricks, Great Falls
 Jack Wayne Mathis,
 White Sulphur Springs
 Robert Howard Blethan, Kalispell
 Donnel R. Gaul, Alberton

INSTRUMENT

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 Thomas Edward Hendricks,
 Great Falls
 Walter Alexander Pashley,
 Missoula
 Michael Howard Peretti,
 Missoula
 Donnel R. Gaul, Alberton
 Joachim Alfred Gloschat,
 Great Falls
 Alan Leroy King, Billings
 Fred Durand Lark, Lewistown
 Henry Albert Bernard, Miles City
 James Delano Paulson, Scobey

Jay Eugene Harvey, Roy
 Gary Cyril Lowry, Missoula
 Richard David Schurian, Victor
 William Francis McNulty, Stevensville
 Michael Dean Thorsen, Great Falls
 Robert Howard Blethen, Kalispell

MULTI ENGINE

David Edward Gans, Lewistown
 Ronald William Lindgren, Helena
 Donald Allan Turner, Bozeman
 James Donald Briden, Valier
 John Kenneth Ming, Kalispell
 Fred John Flanders, Helena

FLIGHT INSTRUCTOR

Betty Ann Sweeting,
 Lewistown (CFI)
 Jack Thomas Martinell,
 Whitehall (CFI)
 Stephen Henry Palmbush,
 Conrad (CFI)
 Charles Orville Moore,
 Roundup (FII)

Wilferd Alan Werner,
 Great Falls (FIA)
 Lonnie Dale Ludiker, Livingston
 Theodore Allan Brodowy, Kalispell
 James Beveridge Reid, Bigfork
 Kenneth Baxter Porter, Bigfork

GLIDER

Terry Francis Albertson,
 West Yellowstone
REPAIRMAN—RADIO-INSTRUMENT
 Steven Charles Horinek,
 Billings
 Jay Lee Reno, Billings

SEA

Paul Philip Schafer, Great Falls
 Delbert Elsworth Bloom, Lewistown
 Boifeuillet, Missoula
 Richard Leroy Johnson, Billings
AIR TRANSPORT PILOT
 Jerry Wayne Simpson, Helena

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE—"To foster aviation, as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in **research, development, and advancement of aviation**; to develop uniform laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."



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NOVEMBER, 1977

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